S2 SECURITY®

Integrated security for an IP-connected world®

S2 NetBox®

S2 pronto® VR

S2 NetVR®

Hardware Installation Guide

June 2012

S2 Security Corporation
One Speen Street
Suite 300
Framingham, MA 01701
www.s2sys.com
S2 Support: 508 663-2505

Document #VR-HW-02

© S2 Security® Corporation 2004-2012. All rights reserved.

This guide is protected by copyright and all rights are reserved by S2 Security Corporation. It may not, in whole or in part, except insofar as herein directed, be copied, photocopied, reproduced, translated or reduced to any electronic medium or machine-readable form without prior written consent of S2 Security Corporation.

Third party trademarks, trade names, product names, and logos may be the trademarks or registered trademarks of their respective owners.

The following are trademarks or registered trademarks of S2 Security Corporation:

- S2 NetBox®, S2 NetBox® Plus, S2 NetBox® Extreme, S2 NetBox® MicroNode, S2 NetBox®VR
- S2 Enterprise® Select, S2 Enterprise® Ultra, S2 Enterprise® Ultra 2
- S2 Pronto®, S2 Pronto® 2, S2 Pronto®VR, S2 NetVR®, S2 Global™

S2 Cumulus℠ is a service mark of S2 Security Corporation.

Integrated security for an IP-connected world® is a registered trademark of S2 Security Corporation.

Contents

Introduction **1**
Where to Go for More Information 1
Installation Notes 2
When Regional Laws Apply 2

Preparing to Install **3**
System Overview 3
Topology Considerations 3
System Requirements 7

Mounting the Cabinet **8**
Placing the Cabinet on a Desktop 8
Mounting the Rack Mount Cabinet 8

Connecting Power and the Network **10**
Connecting the Cabinet 10
Back Panel 10
Front Panel 11

Setting Up a Small Configuration Network **12**

Interpreting LED States and System Beeps **14**
Interpreting System LED States 14
Interpreting System Beeps 14

Resetting the NetBox *VR* / Pronto *VR* / NetVR IP Address and Login Settings **15**
Using Revert Button to Reset IP Address and Login Settings 16

Introduction

S2 NetBox *VR* or Pronto *VR* integrates NetVR video management capability including recording, advanced surveillance, and forensics, into S2 Pronto 2 or NetBoxP2 systems. This guide describes the NetBox *VR* or Pronto *VR* hardware installation, including the following information:

- A system overview (page 3), topology considerations (page 3), and system requirements (page 7).
- Instructions for mounting the cabinet (page 8).
- Instructions for connecting power and the network (page 10).
- Instructions for setting up a small network, which can be used to complete the initial software setup before connecting the controller to the corporate network (page 12).
- Information on interpreting the various system indicators (LED states and beeps) (page 14).
- Instructions for resetting the controller IP address and login to factory defaults (page 15).

Note: Check the S2 Security web site (**www.s2sys.com**) for updated specifications, lists of supported devices, and software updates.

Where to Go for More Information

When the hardware installation is complete, refer to the following publications:

- The "NetVR Setup and Configuration Guide" for information on configuring the NetVR appliance to work with your S2 security and surveillance equipment.
- The "NetVR User Guide" for information on administering and operating your NetVR appliance.

Installation Notes

Note to Installers

Install according to national and local codes (ANSI/NFPA70).

Disclaimer

The S2 Security Corporation provides this publication “as is,” without warranty of any kind, either expressed or implied. The S2 Security Corporation shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this guide.

When Regional Laws Apply

Mains Disconnect

When required, the power cord serves as a mains disconnect.

Earth Ground

When required, the enclosure is wired direct to protective earth ground.

Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rule, when used with a Würth Elektronik snap Ferrite 74271142.

Preparing to Install

System Overview

S2 NetBox *VR* or Pronto *VR* is provided in a tabletop or rack mount enclosure that includes both an S2 network controller (NetBoxP2 or Pronto 2) and an advanced video surveillance system integrated to work seamlessly with your security system and cameras.

NetVR is provided in a tabletop or rack mount enclosure that includes an advanced video surveillance system integrated to work seamlessly with your security system and cameras. S2 Security systems allow connections to be defined to multiple NetVR appliances, as shown in the following table.

Controller	# Cameras	# of Subordinate NetVRs
Pronto	32	4
ProntoVR	32	3 (4)*
NetBox	32	4
NetBoxVR	32	3 (4)*
Extreme	128	8
Enterprise	1024	64

* ProntoVR and NetBoxVR include NetVR software, therefore 3 additional NetVRs may be connected.

NetBox *VR*, Pronto *VR*, or NetVR comes with a hardware kit including table top and rack-mount hardware and power cord.

An S2 security management system is web-based and does not require a computer to operate. A computer is required only for system setup, programming, and monitoring.

NetBox *VR* or Pronto *VR* contains embedded controller software including an operating system, a web server, application software, and a database.

Topology Considerations

Issues to consider when selecting a topology for a NetBox *VR* or Pronto *VR* or NetVR installation include simplicity, security, bandwidth requirements, and current network topology.

The simplest topology, shown in Figure 1, will be the most common case for small systems. All users and network resources share the same LAN.

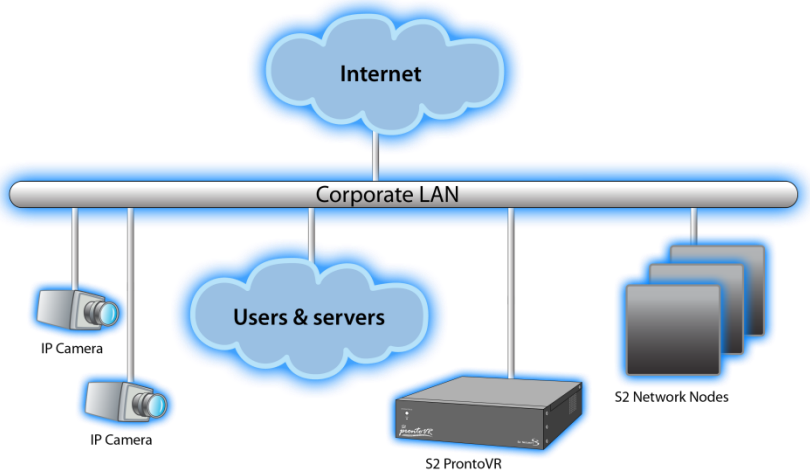

Figure 1. The simplest topology for a NetBox *VR* or Pronto *VR* installation.

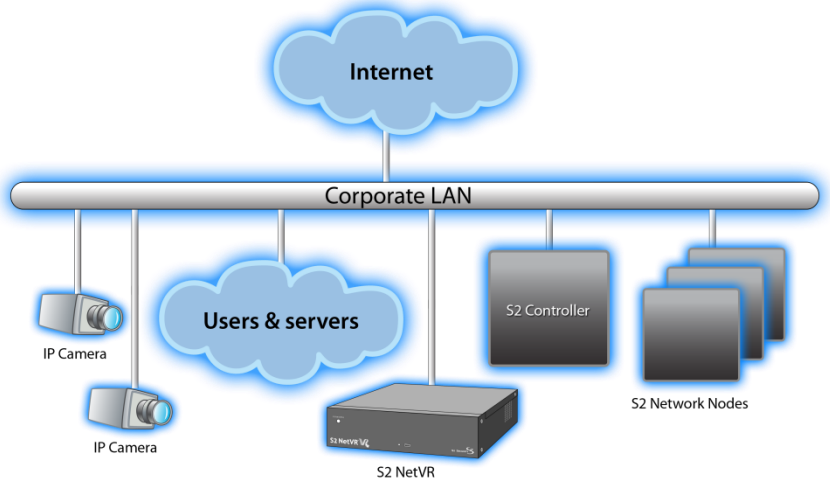

Figure 2. The simplest topology for a NetVR installation.

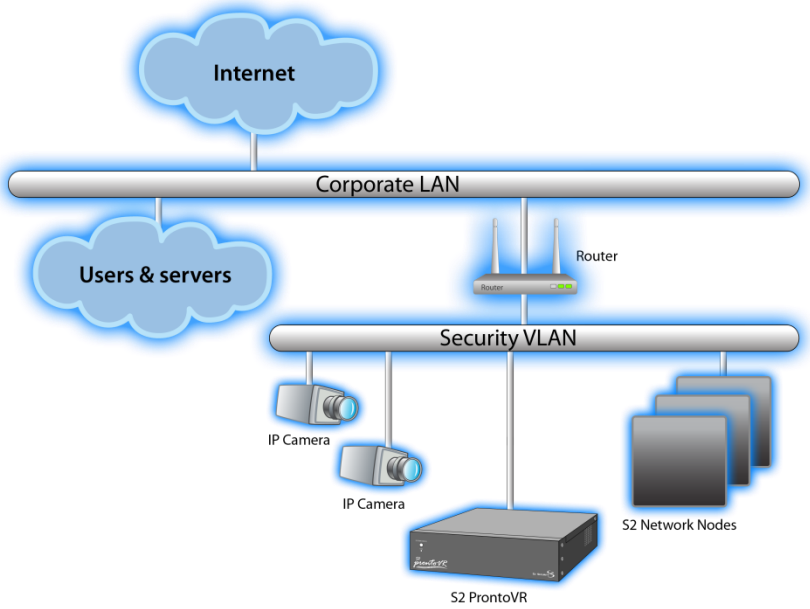

Figure 3. A more secure topology for NetBox *VR* or Pronto *VR* that includes a router.

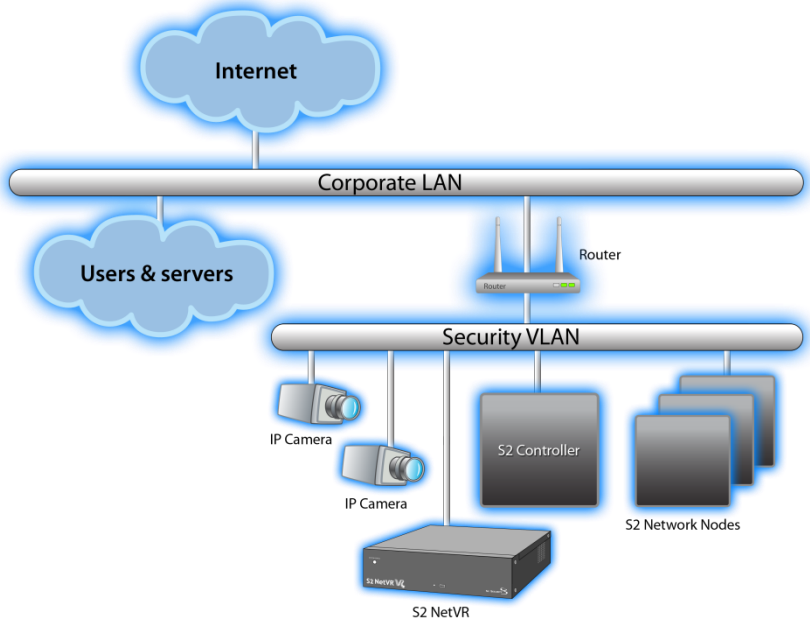

Figure 4. A more secure topology for NetVR that includes a router.

In this case, a router is used to create a subnet for the security system. As a result, the corporate LAN does not directly carry traffic between the NetBox *VR* or Pronto *VR* or NetVR appliance and the cameras.

The advantages to this topology are increased network security and decreased bandwidth impact on the corporate network.

System Requirements

Network Requirements

The application is designed to work with Ethernet networks using TCP/IP.

Before beginning the installation, obtain the information in the following checklist from the customer's network administrator.

Network Information Checklist:

- ❑ Static IP address for the controller.
- ❑ Subnet mask for the controller.
- ❑ Gateway IP address, if needed.

PC Requirements

NetBox *VR*, Pronto *VR*, or NetVR is designed to work with client machines with these minimum specifications:

- Windows XP, 7
- Dual Core i5
- 8GB RAM
- 500GB Hard Drive
- Screen Resolution of 1600 x 1200

Browser Requirements

The application is designed to work with the following web browsers:

- Internet Explorer Version 8.0 or 9.0

Power Requirements

The NetBox *VR*, Pronto *VR*, or NetVR appliance:

- AC input: 100-240 VAC, 4-2A, 50-60 Hz
- Power must come from a ***dedicated circuit breaker-protected circuit*** with an isolated earth ground.

Mounting the Cabinet

The NetBox *VR*, Pronto *VR*, or NetVR cabinet can be mounted in a rack or placed on a desktop.

Placing the Cabinet on a Desktop

There are four rubber feet supplied for placing the cabinet on a table top.

Figure 5. The surface-mount cabinet.

Use the supplied alcohol wipe to clean the surface before attaching the adhesive-backed rubber feet, as shown in Figure 5. Use the markings on the bottom of the enclosure for placement.

Mounting the Rack Mount Cabinet

Remove 3 plastic plugs on each side, then use the 6 supplied screws to attach the rack mount brackets to the cabinet.

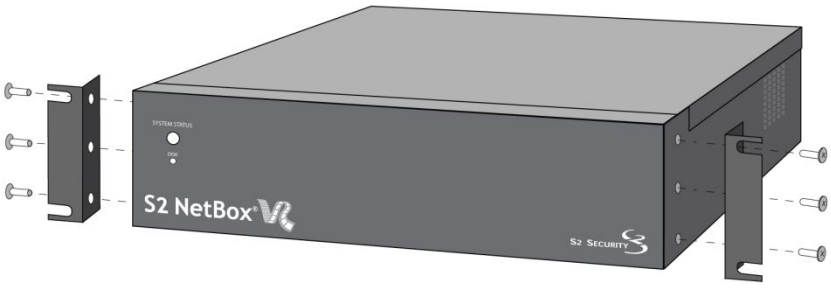

Figure 6. Attaching the rack mount brackets.

Bolt the 2U rack mount cabinet, shown in Figure 7, into a standard 19-inch rack.

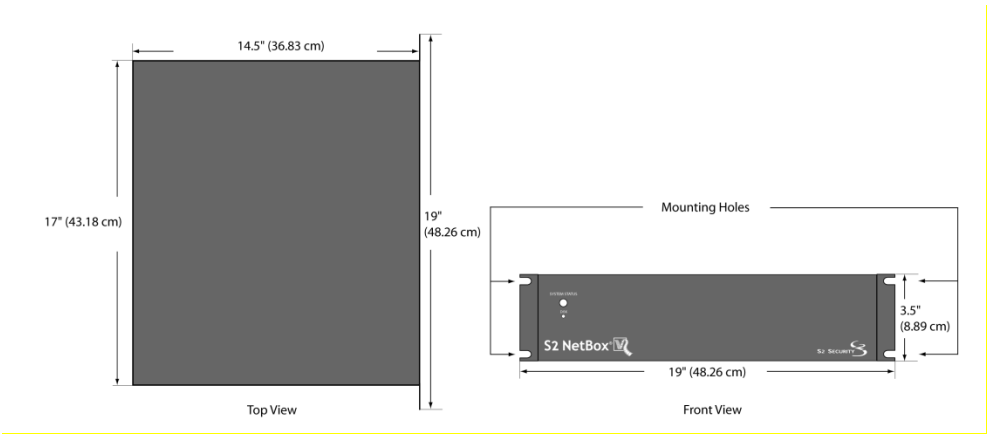

Figure 7. The 2U rack mount cabinet dimensions.

Connecting Power and the Network

This section describes how to connect the appliance to a power source and the network.

Connecting the Cabinet

The cabinet has a IEC receptacle exposed on the back and need not be wired. You will only need to connect the appliance to a power source and to the network. A grounded power cord is provided.

To connect a power cord and network cable:

1. Connect the grounded power cord to the power receptacle on the back of the cabinet.
2. Connect the network cable to the RJ45 connector on the back of the cabinet. Be sure to place the cable in the correct connector (G), as shown in Figure 8.
3. To configure the NetBox *VR*, Pronto *VR*, or NetVR proceed to Setting Up a Small Configuration Network on page 12 for the steps to connect the appliance to a local PC and then to power.

Back Panel

Figure 8 shows the location of the back panel connectors.

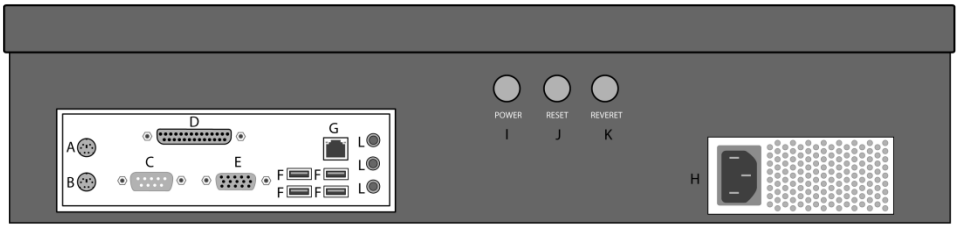

Figure 8. NetBox *VR*/Pronto *VR*/NetVR back panel.

Item	Description	Status
A	PS/2 keyboard/mouse	*Service use only*
B	PS/2 keyboard/mouse	*Service use only*
C	Serial port	*Service use only*
D	Parallel port	*Service use only*
E	VGA port	*Service use only*
F	USB ports	*Service use only*

Item	Description	Status
G	LAN	Supported
H	Line in	Supported
I	Power button	See page 12 and page 16.
J	Reset button	See page 16.
K	Revert button	See page 15.
L	Audio (Mic / Speaker)	Not supported

Front Panel

Figure 9 shows the location of the front panel lights/indicators.

Figure 9. NetBox *VR*/Pronto *VR*/NetVR Front Panel.

Item	Description	Status/States
A	System Status light	LED states are described on page 14.
B	Disk activity light	Flashes when disk is accessed.

Setting Up a Small Configuration Network

Before connecting the controller to the corporate network, be sure to review the following information. You may need to set up a small network between the NetVR appliance and a PC that can be used to configure the system before it is connected to the corporate network.

NetBox *VR* or Pronto *VR* is configured with a factory default IP address of 192.168.0.250. NetVR is configured with a factory default IP address of 192.168.0.249.

- If this is a valid address on a corporate network that is available for use, you can connect NetBox *VR*, Pronto *VR*, or NetVR in its factory default state to the corporate network before configuring it. The Network Administrator will be able to tell you if the default IP address is available on the corporate network.

OR

- If the NetBox *VR* or Pronto *VR* default IP address is not available on the network, it will need to be to be changed during the initial software setup to an address provided by the Network Administrator. If the NetVR default IP address is not available on the network, it will need to be to be changed during the initial network setup to an address provided by the Network Administrator.

Important: Do not connect NetBox *VR*, Pronto *VR*, or NetVR to the corporate network until its IP address has been verified as available or changed to a valid address on that network.

To allow the person who will complete the initial setup to change the system's IP address before connecting it to the network, you should create a small network between the NetVR appliance and the configuration PC.

4. Connect NetBox *VR*, Pronto *VR*, or NetVR directly to local PC (not on the corporate network) using an Ethernet cable.
5. Attach the line cord to the appliance, then to power. Press the **Power** button. The System Status light turns red.

   Note: If the system was running when last connected to power, it will start up automatically on restoring power.

   ---

6. Ensure that the person who will perform the initial setup knows that the IP address of the configuration PC must be changed to a static value of 192.168.0.x (where x is a number other than 249, 250, or 251).

Note: The default IP address for NetVR is 192.168.0.249; for the S2 controller 192.168.0.250; and for Mercury boards 192.168.0.251.

7. To proceed with the setup of a NetBox *VR* or Pronto *VR*, refer to the ***Initial Software Setup Guide*** for detailed instructions. To proceed with the setup of a NetVR appliance, refer to the ***NetVR Setup and Configuration Guide*** and to the online help topic "Configuring an S2 NetVR Appliance".

Note: S2 Security systems allow connections to be defined to multiple NetVR appliances, as shown in the table in System Overview on page 3.

Interpreting LED States and System Beeps

For testing and troubleshooting purposes, this section describes how to interpret the different states of the system LED and the various system beeps.

Interpreting System LED States

For the **Revert**, **Reset**, and **Power** buttons on the back panel (see Figure 8), the following table describes the different states of the LED located on the front of the cabinet and shown in Figure 9.

LED State	Meaning
Off	System is down
Red, blinking	System is starting up or shutting down but is not connected to the network
Red steady	System is up, network connection is down
Blue blinking	System is starting up or shutting down, network connection is up
Blue steady	System is up, network connection is up

Interpreting System Beeps

# of Beeps	Meaning
Shutting Down:	
Two beeps	Most operating tasks have been completed and the file system is about to be un-mounted. After waiting a few seconds, you can remove power.
Powering Up:	
One beep	Startup is complete and you can log into the system. This may take several minutes.
Resetting Controller IP Address and Login Factory Defaults (via the hardware)	
Three beeps	The IP address and login factory defaults have been reset via the Revert button (described on page 15.)
Resetting System Configuration Factory Defaults (via the software)	
Three beeps	The system configuration factory defaults have been reset via the Initmode page in the UI, and the system is about to reboot.

Resetting the NetBox *VR* / Pronto *VR* / NetVR IP Address and Login Settings

If you are unable to log in to the security application because the IP address or login information is unknown, you will need to reset the controller's IP address and login settings. Because you cannot do this through the user interface, you will need to use the following procedure:

Use the **Revert** button on the back panel of the unit to reset the IP address and login settings, as described on page 16.

The revert procedure does the following:

- Resets all controller network settings to their factory defaults:
- The IP address is reset to 192.168.0.250 for NetBox VR or Pronto VR, and to192.168.0.249 for NetVR.
  - The subnet mask is reset to 255.255.255.0.
  - The gateway, DNS 1, and DNS 2 are each reset to 192.168.0.
  - Resets the controller web server port to 80.
- Resets the password for the default administrator account to "admin."
- Re-enables the administrator account, if necessary.
- Reassigns full system administrator rights to the default administrator account.
- Resets the interface language to English.

Note: Once the controller IP address and login settings have been reset, you can change them at any time by selecting **Setup : Site Settings : Network Controller** in NetBox *VR* or from the **Setup** menu page in Pronto *VR*. Click the Initmode link to change the network settings and the web server port number. Click the Localization link to change the language. Use the **Setup : NetVR Appliances** page to change settings for NetVR.

Using Revert Button to Reset IP Address and Login Settings

To use the Revert button to reset controller IP address and login settings for NetBox *VR* or Pronto *VR*:

1. Press the **Revert** button (shown in Figure 8) and hold it for a minimum of three seconds.

   After 15 to 30 seconds, the system will beep three times. This indicates that the controller settings have been reset.

2. To log into the security application, point your browser to the default controller IP address: **192.168.0.250**.

Note: The **Power** and **Reset** buttons shown in Figure 8 can be used in the following ways:

When the system is up and running, holding down the **Power** button for four seconds or longer causes a shutdown of the system, which is equivalent to unplugging it. Holding down the button for fewer than four seconds causes the LED to blink and shuts down the system in an orderly manner.

When the system is not running, pressing the **Power** button starts the system.

Pressing the **Reset** button causes an orderly power reset of the system.